

**U.S. ENVIRONMENTAL PROTECTION AGENCY
NATIONAL ANALYTICAL RADIATION ENVIRONMENTAL LABORATORY
540 S. MORRIS AVE., MONTGOMERY, AL 36115
U ANALYSES**

REPORT OF SAMPLE DELIVERY GROUP #1600015

Project: Canadian Radium & Uranium, Mt. Kisco, NY
 Analysis method: Isotopic Uranium Using NaOH Fusion
 Report ID: 1600015-U
 Report type: Original
 Date reported: 06/16/2016
 Total pages in report: 32

SAMPLES

NAREL Sample #	Client Sample ID	Location	Matrix	Date Collected	Date Received
B6.04104Y	C2-SB1-0012-01	NY:MT. KISCO	SOIL	04/06/2016	04/19/2016
B6.04105Z	C2-SB1-4860-01	NY:MT. KISCO	SOIL	04/06/2016	04/19/2016
B6.04106A	C2-SB1-6072-01	NY:MT. KISCO	SOIL	04/06/2016	04/19/2016
B6.04107B	C2-SB1-7284-01	NY:MT. KISCO	SOIL	04/06/2016	04/19/2016
B6.04108C	C2-SB1-8496-01	NY:MT. KISCO	SOIL	04/06/2016	04/19/2016
B6.04109D	C2-SB2-0012-01	NY:MT. KISCO	SOIL	04/06/2016	04/19/2016
B6.04110W	C2-SB2-1224-01	NY:MT. KISCO	SOIL	04/06/2016	04/19/2016
B6.04111X	C2-SB2-2436-01	NY:MT. KISCO	SOIL	04/06/2016	04/19/2016
B6.04112Y	C2-SB2-3648-01	NY:MT. KISCO	SOIL	04/06/2016	04/19/2016
B6.04113Z	C2-SB2-7284-01	NY:MT. KISCO	SOIL	04/06/2016	04/19/2016
B6.04114A	C2-SB2-7284-02	NY:MT. KISCO	SOIL	04/06/2016	04/19/2016
B6.04115B	C2-SB2-8496-01	NY:MT. KISCO	SOIL	04/06/2016	04/19/2016
B6.04116C	C2-SB3-0012-01	NY:MT. KISCO	SOIL	04/06/2016	04/19/2016
B6.04117D	C2-SB3-1224-01	NY:MT. KISCO	SOIL	04/06/2016	04/19/2016
B6.04118E	C2-SB3-4860-01	NY:MT. KISCO	SOIL	04/06/2016	04/19/2016
B6.04119F	C2-SB3-6072-01	NY:MT. KISCO	SOIL	04/06/2016	04/19/2016
B6.04120Y	C2-SB3-7284-01	NY:MT. KISCO	SOIL	04/06/2016	04/19/2016

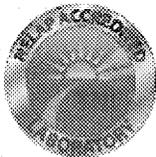
EXCEPTIONS

- Packaging and shipping** – No problems were observed.
- Documentation** – No problems were observed.
- Sample preparation** – No problems were encountered.
- Analysis** – Client requested NAREL report the following uranium isotopes: U-233/234, U-235/236, and U-238. Client was informed that NAREL does not provide results for U-233 and U-236.
- Holding times** – No holding times were specified.

QUALITY CONTROL

- QC samples** – All QC analysis results met NAREL acceptance criteria.
- Yields** – All chemical yields were within acceptance limits.
- Instruments** – Response and background checks for all instruments used in these analyses met NAREL acceptance criteria.

ACCREDITATION



All analyses included in this data package are accredited by the Oregon Environmental Laboratory Accreditation Program (ORELAP) to the TNI standard.

CERTIFICATION

I certify that this data report complies with the terms and conditions of the Project Acceptance Form and/or the Quality Assurance Project Plan, except as noted above. Release of the data contained in this report has been authorized by the Director of the Center for Environmental Radioanalytical Laboratory Science and the NAREL Quality Assurance Manager, or their designees, as verified by the following signatures.

A handwritten signature in cursive script, appearing to read "Velinda Herbert".

Velinda Herbert
Quality Assurance Manager, NAREL

A handwritten date "6/22/16" in cursive script.

Date

A handwritten signature in cursive script, appearing to read "Cynthia White".

Cynthia White
Director, Center for Environmental Radioanalytical
Laboratory Science

A handwritten date "6-22-16" in cursive script.

Date

GENERAL INFORMATION

SAMPLE TYPES

BLD	Blind sample
FBK	Field blank
SAM	Normal sample

ANALYSIS QC TYPES

ANA	Normal analysis
DUP	Laboratory duplicate
LCS	Laboratory control sample, or blank spike
MS	Matrix spike
MSD	Matrix spike duplicate (not currently analyzed)
RBK	Method blank
STD	External standard (used for ²²⁸ Ra yield determination)

QUALITY INDICATORS

RPD	Relative Percent Difference
%R	Percent Recovery
Z	Number of standard deviations by which a QC measurement differs from the expected value

RADIOCHEMICAL DATA

Radiochemical analyses usually require the subtraction of an instrument background measurement result from a gross sample measurement result. Both values are positive, but when the sample activity is low, random variations in the two measurements can cause the gross value to be less than the background, resulting in a measured activity less than zero. Although negative activities have no physical significance, they do have statistical importance, as for example in the evaluation of trends or the comparison of two groups of samples.

To the extent practical, it is the policy of NAREL to report results as generated, whether positive, negative, or zero, together with the “2-sigma” measurement uncertainty and a sample-specific estimate of the minimum detectable concentration (MDC). The measurement result, uncertainty, and MDC are always expressed in the same unit of measurement.

EVALUATION OF QC ANALYSES

A method blank result is considered unacceptable if it is more than 3 standard deviations below zero or more than 3 standard deviations above a predetermined upper control limit. For some analyses NAREL has set the upper control limit at zero. For others the control limit is a small positive number.

NAREL evaluates the results of duplicate and spike analyses using “Z scores.” A Z score is the number of standard deviations by which the QC result differs from its ideal value. Generally the score is considered acceptable if its absolute value is not greater than 3.

The Z score for a spiked sample is computed by dividing the difference between the measured value and the target value by the combined standard uncertainty of the difference. The Z score for a duplicate analysis is computed by dividing the difference between the two measured values by the combined standard uncertainty of the difference.

NAREL reports the “relative percent difference,” or RPD, between duplicate results and the “percent recovery,” or %R, for spiked analyses, but does not use these values for evaluation of most analyses. An exception is the use of %R in the evaluation of gross alpha matrix spike results. A gross alpha matrix spike result is considered acceptable if either $|Z| \leq 3$ or $60 \leq \%R \leq 110$.

Chain of Custody Forms

53
 From *Woods #4*
 4-20-16

No: 2-041816-105138-0008
 Lab: NAREL
 Lab Contact: Tonya Hudson
 Lab Phone: (343) 270-3433

CHAIN OF CUSTODY RECORD
 Canadian Radium & Uranium Corp/NU
 Contact Name: Bernard Nwosu
 Contact Phone: (908) 565-2980

Page 1 of 9
USEPA
 Date Shipped: 4/18/2016
 Carrier Name: FedEx
 Airbill No: 8022 3572 1333

Lab #	Sample #	Sample Date	Sample Time	Analyses	Matrix	Preservative	Lab QC	Numb Cont	Container
5	C002-SB001-0012-01 ✓	4/6/2016	13:56	Isotopic Thorium ✓	Soil	4 C	N	1	8 oz glass jar ✓
5	C002-SB001-0012-01 ✓	4/6/2016	13:56	Isotopic Uranium ✓	Soil	4 C	N	1	8 oz glass jar ✓
5	C002-SB001-0012-01 ✓	4/6/2016	13:56	Gamma Spec (Modified) ✓	Soil	4 C	N	1	16 oz glass jar ✓
5	C002-SB001-4860-01 ✓	4/6/2016	13:57	Isotopic Thorium ✓	Soil	4 C	N	1	8 oz glass jar ✓
5	C002-SB001-4860-01 ✓	4/6/2016	13:57	Isotopic Uranium ✓	Soil	4 C	N	1	8 oz glass jar ✓
5	C002-SB001-4860-01 ✓	4/6/2016	13:57	Gamma Spec (Modified) ✓	Soil	4 C	N	1	16 oz glass jar ✓
5	C002-SB001-6072-01 ✓	4/6/2016	13:57	Isotopic Thorium ✓	Soil	4 C	N	1	8 oz glass jar ✓
5	C002-SB001-6072-01 ✓	4/6/2016	13:57	Isotopic Uranium ✓	Soil	4 C	N	1	8 oz glass jar ✓
5	C002-SB001-6072-01 ✓	4/6/2016	13:57	Gamma Spec (Modified) ✓	Soil	4 C	N	1	16 oz glass jar ✓
5	C002-SB001-7284-01 ✓	4/6/2016	13:57	Isotopic Thorium ✓	Soil	4 C	N	1	8 oz glass jar ✓
5	C002-SB001-7284-01 ✓	4/6/2016	13:57	Isotopic Uranium ✓	Soil	4 C	N	1	8 oz glass jar ✓
5	C002-SB001-7284-01 ✓	4/6/2016	13:57	Gamma Spec (Modified) ✓	Soil	4 C	N	1	16 oz glass jar ✓
5	C002-SB001-8495-01 ✓	4/6/2016	13:57	Isotopic Thorium ✓	Soil	4 C	N	1	8 oz glass jar ✓
5	C002-SB001-8495-01 ✓	4/6/2016	13:57	Isotopic Uranium ✓	Soil	4 C	N	1	8 oz glass jar ✓
5	C002-SB001-8495-01 ✓	4/6/2016	13:57	Gamma Spec (Modified) ✓	Soil	4 C	N	1	16 oz glass jar ✓
5	C002-SB002-0012-01 ✓	4/6/2016	14:31	Isotopic Thorium ✓	Soil	4 C	N	1	8 oz glass jar ✓
5	C002-SB002-0012-01 ✓	4/6/2016	14:31	Isotopic Uranium ✓	Soil	4 C	N	1	8 oz glass jar ✓
5	C002-SB002-0012-01 ✓	4/6/2016	14:31	Gamma Spec (Modified) ✓	Soil	4 C	N	1	16 oz glass jar ✓
5	C002-SB002-4224-01 ✓	4/6/2016	14:31	Isotopic Thorium ✓	Soil	4 C	N	1	8 oz glass jar ✓

SAMPLES TRANSFERRED FROM
CHAIN OF CUSTODY #
 Special Instructions: Sample Analysis PO#: 0091198; Gamma Spectroscopy analysis for soil samples to include: Ra-226 (in-growth), Ra-228, K-40, Th-208, Bi-212, Bi-214, Pb-212, Pb-214, Ra-226, Ra-228, Th-232, U-235, U-238, Bi-210. Email results to s.sumbaly@westonesolutions.com and ben.nwosu@westonesolutions.com

Items/Reason	Relinquished by (Signature and Organization)	Date/Time	Received by (Signature and Organization)	Date/Time	Sample Condition Upon Receipt
	<i>Bernard Nwosu RSTB</i>		<i>John NAREL</i>	<i>04/19/2016</i>	<i>Good</i>

USEPA

Date Shipped: 4/18/2016
 Carrier Name: FedEx
 Airbill No: 8022 3572 1333

CHAIN OF CUSTODY RECORD

Canadian Radium & Uranium Corp/NY
 Contact Name: Bernard Nwosu
 Contact Phone: (908) 565-2980

No: 2-041818-105138-0008

Lab: NAREL
 Lab Contact: Tonya Hudson
 Lab Phone: (343) 270-3433

Lab #	Sample #	Sample Date	Sample Time	Analyses	Matrix	Preservative	Lab QC	Numb Cont	Container
	C002-SB002-1224-01 ✓	4/6/2016	14:31	Isotopic Uranium ✓	Soil	4 C	N	1	8 oz glass jar ✓
	C002-SB002-1224-01 ✓	4/6/2016	14:31	Gamma Spec (Modified) ✓	Soil	4 C	N	1	16 oz glass jar ✓
	C002-SB002-2436-01 ✓	4/6/2016	14:32	Isotopic Thorium ✓	Soil	4 C	N	1	8 oz glass jar ✓
	C002-SB002-2436-01 ✓	4/6/2016	14:32	Isotopic Uranium ✓	Soil	4 C	N	1	8 oz glass jar ✓
	C002-SB002-2436-01 ✓	4/6/2016	14:32	Gamma Spec (Modified) ✓	Soil	4 C	N	1	16 oz glass jar ✓
	C002-SB002-3648-01 ✓	4/6/2016	14:32	Isotopic Thorium ✓	Soil	4 C	N	1	8 oz glass jar ✓
	C002-SB002-3648-01 ✓	4/6/2016	14:32	Isotopic Uranium ✓	Soil	4 C	N	1	8 oz glass jar ✓
	C002-SB002-3648-01 ✓	4/6/2016	14:32	Gamma Spec (Modified) ✓	Soil	4 C	N	1	16 oz glass jar ✓
	C002-SB002-7284-01 ✓	4/6/2016	14:33	Isotopic Thorium ✓	Soil	4 C	N	1	8 oz glass jar ✓
	C002-SB002-7284-01 ✓	4/6/2016	14:33	Isotopic Uranium ✓	Soil	4 C	N	1	8 oz glass jar ✓
	C002-SB002-7284-01 ✓	4/6/2016	14:33	Gamma Spec (Modified) ✓	Soil	4 C	N	1	16 oz glass jar ✓
	C002-SB002-7284-02 ✓	4/6/2016	14:33	Isotopic Thorium ✓	Soil	4 C	N	1	8 oz glass jar ✓
	C002-SB002-7284-02 ✓	4/6/2016	14:33	Isotopic Uranium ✓	Soil	4 C	N	1	8 oz glass jar ✓
	C002-SB002-7284-02 ✓	4/6/2016	14:33	Gamma Spec (Modified) ✓	Soil	4 C	N	1	16 oz glass jar ✓
	C002-SB002-8496-01 ✓	4/6/2016	14:33 ✓	Isotopic Thorium ✓	Soil	4 C	Y	2	8 oz glass jar ✓
	C002-SB002-8496-01 ✓	4/6/2016	14:33 ✓	Isotopic Uranium ✓	Soil	4 C	Y	2	8 oz glass jar ✓
	C002-SB002-8496-01 ✓	4/6/2016	14:33 ✓	Gamma Spec (Modified) ✓	Soil	4 C	N	1	16 oz glass jar ✓
	C002-SB003-0012-01	4/6/2016	13:17	Isotopic Thorium	Soil	4 C	N	1	8 oz glass jar
	C002-SB003-0012-01	4/6/2016	13:17	Isotopic Uranium	Soil	4 C	N	1	8 oz glass jar

Special Instructions: Sample Analysis PO#-0091198; Gamma Spectroscopy analysis for soil samples to include: Ra-226 (in-growth), Ra-226, K-40, Th-232, Bi-212, Bi-214, Pb-212, Pb-214, Ra-226, Ra-228, Th-232, U-235, Pb-210, Bi-210. Email results to s.surbaily@westonsolutions.com and ben.nwosu@westonsolutions.com

SAMPLES TRANSFERRED FROM CHAIN OF CUSTODY #

Items/Reason	Relinquished by (Signature and Organization)	Date/Time	Received by (Signature and Organization)	Date/Time	Sample Condition Upon Receipt
	<i>Bernard Nwosu</i>		<i>Chad NAREL</i>	07/19/15	Good

USEPA

Date Shipped: 4/18/2016
 Carrier Name: FedEx
 Airbill No: 8022 3572 1333

CHAIN OF CUSTODY RECORD

Canadian Radium & Uranium Corp/NY
 Contact Name: Bernard Nwosu
 Contact Phone: (808) 585-2980

No: 2-041816-105138-0088

Lab: NAREL
 Lab Contact: Tonya Hudson
 Lab Phone: (343) 270-3433

Lab #	Sample #	Sample Date	Sample Time	Analyses	Matrix	Preservative	Lab QC	Numb Cont	Container
	C002-SB003-0012-01	4/5/2016	13:17	Gamma Spec (Modified)	Soil	4 C	N	1	16 oz glass jar
	C002-SB003-1224-01	4/5/2016	13:17	Isotopic Thorium	Soil	4 C	N	1	8 oz glass jar
	C002-SB003-1224-01	4/5/2016	13:17	Isotopic Uranium	Soil	4 C	N	1	8 oz glass jar
	C002-SB003-1224-01	4/5/2016	13:17	Gamma Spec (Modified)	Soil	4 C	N	1	16 oz glass jar
	C002-SB003-4860-01	4/5/2016	13:18	Isotopic Thorium	Soil	4 C	N	1	8 oz glass jar
	C002-SB003-4860-01	4/5/2016	13:18	Isotopic Uranium	Soil	4 C	N	1	8 oz glass jar
	C002-SB003-4860-01	4/5/2016	13:18	Gamma Spec (Modified)	Soil	4 C	N	1	16 oz glass jar
	C002-SB003-6072-01	4/5/2016	13:18	Isotopic Thorium	Soil	4 C	N	1	8 oz glass jar
	C002-SB003-6072-01	4/5/2016	13:18	Isotopic Uranium	Soil	4 C	N	1	8 oz glass jar
	C002-SB003-6072-01	4/5/2016	13:18	Gamma Spec (Modified)	Soil	4 C	N	1	16 oz glass jar
	C002-SB003-7284-01	4/5/2016	13:18	Isotopic Thorium	Soil	4 C	N	1	8 oz glass jar
	C002-SB003-7284-01	4/5/2016	13:18	Isotopic Uranium	Soil	4 C	N	1	8 oz glass jar
	C002-SB003-7284-01	4/5/2016	13:18	Gamma Spec (Modified)	Soil	4 C	N	1	16 oz glass jar
	C002-SB003-8496-01	4/5/2016	13:19	Isotopic Thorium	Soil	4 C	N	1	8 oz glass jar
	C002-SB003-8496-01	4/5/2016	13:19	Isotopic Uranium	Soil	4 C	N	1	8 oz glass jar
	C002-SB003-8496-01	4/5/2016	13:19	Gamma Spec (Modified)	Soil	4 C	N	1	16 oz glass jar
	C003-SB001-0012-01	4/5/2016	12:19	Isotopic Thorium	Soil	4 C	N	1	8 oz glass jar
	C003-SB001-0012-01	4/5/2016	12:19	Isotopic Uranium	Soil	4 C	N	1	8 oz glass jar
	C003-SB001-0012-01	4/5/2016	12:19	Gamma Spec (Modified)	Soil	4 C	N	1	16 oz glass jar

SAMPLES TRANSFERRED FROM CHAIN OF CUSTODY #

Special Instructions: Sample Analysis PO#-0091198: Gamma Spectroscopy analysis for soil samples to include: Ra-226 (p.growth), Ra-228, K-40, Th-232, Bi-212, Bi-214, Pb-212, Pb-214, Ra-226, Ra-228, Th-232, U-235, Pb-210, Bi-210. Email results to s.sumbaly@westonsolutions.com and ben.nwosu@westonsolutions.com

Items/Reason	Relinquished by (Signature and Organization)	Date/Time	Received by (Signature and Organization)	Date/Time	Sample Condition	Upon Receipt
	<i>Benjamin Nwosu</i>	4/18/16	<i>Cheryl Narell</i>	4/18/16	Sealed	Sealed Sample

**U.S. ENVIRONMENTAL PROTECTION AGENCY
NATIONAL ANALYTICAL RADIATION ENVIRONMENTAL LABORATORY**

SDG #1600015

ANALYSIS SUMMARY

Analysis method: NAREL ACT-02F-U
Title: Isotopic Uranium Using NaOH Fusion

NAREL Sample #	Client Sample ID	QC Type	Date Completed	Preparation Batch #	Assay Batch #
B6.04104Y	C2-SB1-0012-01		06/04/2016	0013431E	0020907Y
B6.04104Y	C2-SB1-0012-01	DUP	06/04/2016	0013431E	0020907Y
B6.04105Z	C2-SB1-4860-01		06/04/2016	0013431E	0020907Y
B6.04106A	C2-SB1-6072-01		06/04/2016	0013431E	0020907Y
B6.04107B	C2-SB1-7284-01		06/04/2016	0013431E	0020907Y
B6.04108C	C2-SB1-8496-01		06/04/2016	0013431E	0020907Y
B6.04109D	C2-SB2-0012-01		06/04/2016	0013431E	0020907Y
B6.04110W	C2-SB2-1224-01		06/04/2016	0013431E	0020907Y
B6.04111X	C2-SB2-2436-01		06/04/2016	0013431E	0020907Y
B6.04112Y	C2-SB2-3648-01		06/04/2016	0013431E	0020907Y
B6.04113Z	C2-SB2-7284-01		06/08/2016	0013439N	0020915Y
B6.04113Z	C2-SB2-7284-01	DUP	06/08/2016	0013439N	0020915Y
B6.04114A	C2-SB2-7284-02		06/08/2016	0013439N	0020915Y
B6.04115B	C2-SB2-8496-01		06/08/2016	0013439N	0020915Y
B6.04116C	C2-SB3-0012-01		06/08/2016	0013439N	0020915Y
B6.04117D	C2-SB3-1224-01		06/08/2016	0013439N	0020915Y
B6.04118E	C2-SB3-4860-01		06/08/2016	0013439N	0020915Y
B6.04119F	C2-SB3-6072-01		06/08/2016	0013439N	0020915Y
B6.04120Y	C2-SB3-7284-01		06/08/2016	0013439N	0020915Y
LCS-00735180E *		LCS	06/04/2016	0013431E	0020907Y
RBK-00735179M *		RBK	06/04/2016	0013431E	0020907Y
LCS-00735299V *		LCS	06/08/2016	0013439N	0020915Y
RBK-00735298U *		RBK	06/08/2016	0013439N	0020915Y

* Samples marked with an asterisk are not in this sample delivery group but were analyzed with it for QC purposes.

**U.S. ENVIRONMENTAL PROTECTION AGENCY
NATIONAL ANALYTICAL RADIATION ENVIRONMENTAL LABORATORY**

SDG #1600015

SAMPLE ANALYSIS REPORT

Lab sample #:	B6.04104Y	Amount analyzed:	9.828e-01 GASH
Client sample ID:	C2-SB1-0012-01	Preparation batch #:	0013431E
Matrix:	SOIL	Assay batch #:	0020907Y
Collected:	2016-04-06 13:56 EDT	Prep procedure:	N/A
Sample type:	SAM	Analysis method:	NAREL ACT-02F-U
Dry/wet weight:	95.75 %	Analyst:	SPK
Ash/dry weight:	88.99 %	QC type:	ANA
Sample description:	N/A		
Comment:	N/A		

COUNTING INFORMATION

Date and time	Duration (min)	Detector ID	Operator
06/03/2016 14:24	1000.0	AS33	RCL

ANALYTICAL RESULTS

Analyte	Activity	$\pm 2 \sigma$ Uncertainty	MDC	Unit	Reference Date
U234	5.28e-01	9.9e-02	2.1e-02	PCI/GDRY	06/03/2016 14:24 CDT
U235	1.99e-02	2.0e-02	2.0e-02	PCI/GDRY	06/03/2016 14:24 CDT
U238	5.50e-01	1.0e-01	2.3e-02	PCI/GDRY	06/03/2016 14:24 CDT

**U.S. ENVIRONMENTAL PROTECTION AGENCY
NATIONAL ANALYTICAL RADIATION ENVIRONMENTAL LABORATORY**

SDG #1600015

SAMPLE ANALYSIS REPORT

Lab sample #:	B6.04104Y	Amount analyzed:	9.871e-01 GASH
Client sample ID:	C2-SB1-0012-01	Preparation batch #:	0013431E
Matrix:	SOIL	Assay batch #:	0020907Y
Collected:	2016-04-06 13:56 EDT	Prep procedure:	N/A
Sample type:	SAM	Analysis method:	NAREL ACT-02F-U
Dry/wet weight:	95.75 %	Analyst:	SPK
Ash/dry weight:	88.99 %	QC type:	DUP
Sample description:	N/A		
Comment:	N/A		

COUNTING INFORMATION

Date and time	Duration (min)	Detector ID	Operator
06/03/2016 14:24	1000.0	AS34	RCL

ANALYTICAL RESULTS

Analyte	Activity	$\pm 2 \sigma$ Uncertainty	MDC	Unit	Reference Date
U234	4.52e-01	8.7e-02	2.1e-02	PCI/GDRY	06/03/2016 14:24 CDT
U235 J	4.44e-02	2.8e-02	1.9e-02	PCI/GDRY	06/03/2016 14:24 CDT
U238	4.13e-01	8.2e-02	1.9e-02	PCI/GDRY	06/03/2016 14:24 CDT

Note: A "J" qualifier indicates a result that may be significantly under or overestimated.

**U.S. ENVIRONMENTAL PROTECTION AGENCY
NATIONAL ANALYTICAL RADIATION ENVIRONMENTAL LABORATORY**

SDG #1600015

SAMPLE ANALYSIS REPORT

Lab sample #:	B6.04105Z	Amount analyzed:	1.009e+00 GASH
Client sample ID:	C2-SB1-4860-01	Preparation batch #:	0013431E
Matrix:	SOIL	Assay batch #:	0020907Y
Collected:	2016-04-06 13:57 EDT	Prep procedure:	N/A
Sample type:	SAM	Analysis method:	NAREL ACT-02F-U
Dry/wet weight:	94.41 %	Analyst:	SPK
Ash/dry weight:	97.26 %	QC type:	ANA
Sample description:	N/A		
Comment:	N/A		

COUNTING INFORMATION

Date and time	Duration (min)	Detector ID	Operator
06/03/2016 14:25	1000.0	AS36	RCL

ANALYTICAL RESULTS

Analyte	Activity	$\pm 2 \sigma$ Uncertainty	MDC	Unit	Reference Date
U234	4.96e-01	9.4e-02	2.6e-02	PCI/GDRY	06/03/2016 14:25 CDT
U235	1.80e-02	2.1e-02	3.1e-02	PCI/GDRY	06/03/2016 14:25 CDT
U238	4.60e-01	8.9e-02	2.6e-02	PCI/GDRY	06/03/2016 14:25 CDT

**U.S. ENVIRONMENTAL PROTECTION AGENCY
NATIONAL ANALYTICAL RADIATION ENVIRONMENTAL LABORATORY**

SDG #1600015

SAMPLE ANALYSIS REPORT

Lab sample #:	B6.04106A	Amount analyzed:	1.006e+00 GASH
Client sample ID:	C2-SB1-6072-01	Preparation batch #:	0013431E
Matrix:	SOIL	Assay batch #:	0020907Y
Collected:	2016-04-06 13:57 EDT	Prep procedure:	N/A
Sample type:	SAM	Analysis method:	NAREL ACT-02F-U
Dry/wet weight:	91.38 %	Analyst:	SPK
Ash/dry weight:	98.14 %	QC type:	ANA
Sample description:	N/A		
Comment:	N/A		

COUNTING INFORMATION

Date and time	Duration (min)	Detector ID	Operator
06/03/2016 14:25	1000.0	AS37	RCL

ANALYTICAL RESULTS

Analyte	Activity	$\pm 2 \sigma$ Uncertainty	MDC	Unit	Reference Date
U234	3.07e-01	7.2e-02	2.4e-02	PCI/GDRY	06/03/2016 14:25 CDT
U235	8.14e-03	1.7e-02	3.1e-02	PCI/GDRY	06/03/2016 14:25 CDT
U238	3.84e-01	8.2e-02	1.7e-02	PCI/GDRY	06/03/2016 14:25 CDT

**U.S. ENVIRONMENTAL PROTECTION AGENCY
NATIONAL ANALYTICAL RADIATION ENVIRONMENTAL LABORATORY**

SDG #1600015

SAMPLE ANALYSIS REPORT

Lab sample #:	B6.04107B	Amount analyzed:	1.003e+00 GASH
Client sample ID:	C2-SB1-7284-01	Preparation batch #:	0013431E
Matrix:	SOIL	Assay batch #:	0020907Y
Collected:	2016-04-06 13:57 EDT	Prep procedure:	N/A
Sample type:	SAM	Analysis method:	NAREL ACT-02F-U
Dry/wet weight:	80.06 %	Analyst:	SPK
Ash/dry weight:	94.96 %	QC type:	ANA
Sample description:	N/A		
Comment:	N/A		

COUNTING INFORMATION

Date and time	Duration (min)	Detector ID	Operator
06/03/2016 14:25	1000.0	AS38	RCL

ANALYTICAL RESULTS

Analyte	Activity	$\pm 2 \sigma$ Uncertainty	MDC	Unit	Reference Date
U234	6.38e-01	1.1e-01	2.8e-02	PCI/GDRY	06/03/2016 14:25 CDT
U235	3.13e-02	2.6e-02	3.0e-02	PCI/GDRY	06/03/2016 14:25 CDT
U238	6.36e-01	1.1e-01	2.0e-02	PCI/GDRY	06/03/2016 14:25 CDT

**U.S. ENVIRONMENTAL PROTECTION AGENCY
NATIONAL ANALYTICAL RADIATION ENVIRONMENTAL LABORATORY**

SDG #1600015

SAMPLE ANALYSIS REPORT

Lab sample #:	B6.04108C	Amount analyzed:	1.029e+00 GASH
Client sample ID:	C2-SB1-8496-01	Preparation batch #:	0013431E
Matrix:	SOIL	Assay batch #:	0020907Y
Collected:	2016-04-06 13:57 EDT	Prep procedure:	N/A
Sample type:	SAM	Analysis method:	NAREL ACT-02F-U
Dry/wet weight:	81.74 %	Analyst:	SPK
Ash/dry weight:	96.75 %	QC type:	ANA
Sample description:	N/A		
Comment:	N/A		

COUNTING INFORMATION

Date and time	Duration (min)	Detector ID	Operator
06/03/2016 14:25	1000.0	AS39	RCL

ANALYTICAL RESULTS

Analyte	Activity	$\pm 2 \sigma$ Uncertainty	MDC	Unit	Reference Date
U234	8.88e-01	1.4e-01	2.7e-02	PCI/GDRY	06/03/2016 14:25 CDT
U235	4.57e-02	2.9e-02	2.4e-02	PCI/GDRY	06/03/2016 14:25 CDT
U238	9.16e-01	1.4e-01	2.5e-02	PCI/GDRY	06/03/2016 14:25 CDT

**U.S. ENVIRONMENTAL PROTECTION AGENCY
NATIONAL ANALYTICAL RADIATION ENVIRONMENTAL LABORATORY**

SDG #1600015

SAMPLE ANALYSIS REPORT

Lab sample #:	B6.04109D	Amount analyzed:	1.019e+00 GASH
Client sample ID:	C2-SB2-0012-01	Preparation batch #:	0013431E
Matrix:	SOIL	Assay batch #:	0020907Y
Collected:	2016-04-06 14:31 EDT	Prep procedure:	N/A
Sample type:	SAM	Analysis method:	NAREL ACT-02F-U
Dry/wet weight:	95.55 %	Analyst:	SPK
Ash/dry weight:	85.26 %	QC type:	ANA
Sample description:	N/A		
Comment:	N/A		

COUNTING INFORMATION

Date and time	Duration (min)	Detector ID	Operator
06/03/2016 14:25	1000.0	AS40	RCL

ANALYTICAL RESULTS

Analyte	Activity	$\pm 2 \sigma$ Uncertainty	MDC	Unit	Reference Date
U234	3.75e-01	7.6e-02	2.2e-02	PCI/GDRY	06/03/2016 14:25 CDT
U235	9.34e-03	1.4e-02	2.2e-02	PCI/GDRY	06/03/2016 14:25 CDT
U238	3.99e-01	7.9e-02	2.0e-02	PCI/GDRY	06/03/2016 14:25 CDT

**U.S. ENVIRONMENTAL PROTECTION AGENCY
NATIONAL ANALYTICAL RADIATION ENVIRONMENTAL LABORATORY**

SDG #1600015

SAMPLE ANALYSIS REPORT

Lab sample #:	B6.04110W	Amount analyzed:	1.006e+00 GASH
Client sample ID:	C2-SB2-1224-01	Preparation batch #:	0013431E
Matrix:	SOIL	Assay batch #:	0020907Y
Collected:	2016-04-06 14:31 EDT	Prep procedure:	N/A
Sample type:	SAM	Analysis method:	NAREL ACT-02F-U
Dry/wet weight:	83.51 %	Analyst:	SPK
Ash/dry weight:	89.80 %	QC type:	ANA
Sample description:	N/A		
Comment:	N/A		

COUNTING INFORMATION

Date and time	Duration (min)	Detector ID	Operator
06/03/2016 14:25	1000.0	AS65	RCL

ANALYTICAL RESULTS

Analyte	Activity	$\pm 2 \sigma$ Uncertainty	MDC	Unit	Reference Date
U234	7.40e-01	1.2e-01	3.7e-02	PCI/GDRY	06/03/2016 14:25 CDT
U235	1.57e-02	2.7e-02	4.7e-02	PCI/GDRY	06/03/2016 14:25 CDT
U238	7.11e-01	1.2e-01	4.2e-02	PCI/GDRY	06/03/2016 14:25 CDT

**U.S. ENVIRONMENTAL PROTECTION AGENCY
NATIONAL ANALYTICAL RADIATION ENVIRONMENTAL LABORATORY**

SDG #1600015

SAMPLE ANALYSIS REPORT

Lab sample #:	B6.04111X	Amount analyzed:	1.017e+00 GASH
Client sample ID:	C2-SB2-2436-01	Preparation batch #:	0013431E
Matrix:	SOIL	Assay batch #:	0020907Y
Collected:	2016-04-06 14:32 EDT	Prep procedure:	N/A
Sample type:	SAM	Analysis method:	NAREL ACT-02F-U
Dry/wet weight:	89.06 %	Analyst:	SPK
Ash/dry weight:	97.20 %	QC type:	ANA
Sample description:	N/A		
Comment:	N/A		

COUNTING INFORMATION

Date and time	Duration (min)	Detector ID	Operator
06/03/2016 14:25	1000.0	AS68	RCL

ANALYTICAL RESULTS

Analyte	Activity	$\pm 2 \sigma$ Uncertainty	MDC	Unit	Reference Date
U234	5.27e-01	9.9e-02	1.7e-02	PCI/GDRY	06/03/2016 14:25 CDT
U235	4.07e-02	2.9e-02	3.1e-02	PCI/GDRY	06/03/2016 14:25 CDT
U238	6.42e-01	1.1e-01	1.7e-02	PCI/GDRY	06/03/2016 14:25 CDT

**U.S. ENVIRONMENTAL PROTECTION AGENCY
NATIONAL ANALYTICAL RADIATION ENVIRONMENTAL LABORATORY**

SDG #1600015

SAMPLE ANALYSIS REPORT

Lab sample #:	B6.04112Y	Amount analyzed:	1.007e+00 GASH
Client sample ID:	C2-SB2-3648-01	Preparation batch #:	0013431E
Matrix:	SOIL	Assay batch #:	0020907Y
Collected:	2016-04-06 14:32 EDT	Prep procedure:	N/A
Sample type:	SAM	Analysis method:	NAREL ACT-02F-U
Dry/wet weight:	90.76 %	Analyst:	SPK
Ash/dry weight:	91.79 %	QC type:	ANA
Sample description:	N/A		
Comment:	N/A		

COUNTING INFORMATION

Date and time	Duration (min)	Detector ID	Operator
06/03/2016 14:25	1000.0	AS69	RCL

ANALYTICAL RESULTS

Analyte	Activity	$\pm 2 \sigma$ Uncertainty	MDC	Unit	Reference Date
U234	5.71e-01	1.0e-01	1.7e-02	PCI/GDRY	06/03/2016 14:25 CDT
U235	3.00e-02	2.5e-02	2.8e-02	PCI/GDRY	06/03/2016 14:25 CDT
U238	6.45e-01	1.1e-01	2.1e-02	PCI/GDRY	06/03/2016 14:25 CDT

**U.S. ENVIRONMENTAL PROTECTION AGENCY
NATIONAL ANALYTICAL RADIATION ENVIRONMENTAL LABORATORY**

SDG #1600015

SAMPLE ANALYSIS REPORT

Lab sample #:	B6.04113Z	Amount analyzed:	1.001e+00 GASH
Client sample ID:	C2-SB2-7284-01	Preparation batch #:	0013439N
Matrix:	SOIL	Assay batch #:	0020915Y
Collected:	2016-04-06 14:33 EDT	Prep procedure:	N/A
Sample type:	SAM	Analysis method:	NAREL ACT-02F-U
Dry/wet weight:	84.35 %	Analyst:	SPK
Ash/dry weight:	95.90 %	QC type:	ANA
Sample description:	N/A		
Comment:	N/A		

COUNTING INFORMATION

Date and time	Duration (min)	Detector ID	Operator
06/07/2016 16:20	1000.0	AS33	CEB

ANALYTICAL RESULTS

Analyte	Activity	$\pm 2 \sigma$ Uncertainty	MDC	Unit	Reference Date
U234	7.14e-01	1.5e-01	3.2e-02	PCI/GDRY	06/07/2016 16:20 CDT
U235	4.38e-02	3.6e-02	3.1e-02	PCI/GDRY	06/07/2016 16:20 CDT
U238	6.39e-01	1.4e-01	3.6e-02	PCI/GDRY	06/07/2016 16:20 CDT

**U.S. ENVIRONMENTAL PROTECTION AGENCY
NATIONAL ANALYTICAL RADIATION ENVIRONMENTAL LABORATORY**

SDG #1600015

SAMPLE ANALYSIS REPORT

Lab sample #:	B6.04113Z	Amount analyzed:	9.982e-01 GASH
Client sample ID:	C2-SB2-7284-01	Preparation batch #:	0013439N
Matrix:	SOIL	Assay batch #:	0020915Y
Collected:	2016-04-06 14:33 EDT	Prep procedure:	N/A
Sample type:	SAM	Analysis method:	NAREL ACT-02F-U
Dry/wet weight:	84.35 %	Analyst:	SPK
Ash/dry weight:	95.90 %	QC type:	DUP
Sample description:	N/A		
Comment:	N/A		

COUNTING INFORMATION

Date and time	Duration (min)	Detector ID	Operator
06/07/2016 16:20	1000.0	AS34	CEB

ANALYTICAL RESULTS

Analyte	Activity	$\pm 2 \sigma$ Uncertainty	MDC	Unit	Reference Date
U234	5.32e-01	1.2e-01	3.5e-02	PCI/GDRY	06/07/2016 16:20 CDT
U235	3.67e-02	3.3e-02	3.1e-02	PCI/GDRY	06/07/2016 16:20 CDT
U238	6.36e-01	1.3e-01	3.1e-02	PCI/GDRY	06/07/2016 16:20 CDT

**U.S. ENVIRONMENTAL PROTECTION AGENCY
NATIONAL ANALYTICAL RADIATION ENVIRONMENTAL LABORATORY**

SDG #1600015

SAMPLE ANALYSIS REPORT

Lab sample #:	B6.04114A	Amount analyzed:	1.011e+00 GASH
Client sample ID:	C2-SB2-7284-02	Preparation batch #:	0013439N
Matrix:	SOIL	Assay batch #:	0020915Y
Collected:	2016-04-06 14:33 EDT	Prep procedure:	N/A
Sample type:	SAM	Analysis method:	NAREL ACT-02F-U
Dry/wet weight:	83.99 %	Analyst:	SPK
Ash/dry weight:	95.93 %	QC type:	ANA
Sample description:	N/A		
Comment:	N/A		

COUNTING INFORMATION

Date and time	Duration (min)	Detector ID	Operator
06/07/2016 16:20	1000.0	AS36	CEB

ANALYTICAL RESULTS

Analyte	Activity	$\pm 2 \sigma$ Uncertainty	MDC	Unit	Reference Date
U234	7.83e-01	1.4e-01	3.6e-02	PCI/GDRY	06/07/2016 16:20 CDT
U235	2.99e-02	3.1e-02	4.3e-02	PCI/GDRY	06/07/2016 16:20 CDT
U238	7.26e-01	1.4e-01	3.6e-02	PCI/GDRY	06/07/2016 16:20 CDT

**U.S. ENVIRONMENTAL PROTECTION AGENCY
NATIONAL ANALYTICAL RADIATION ENVIRONMENTAL LABORATORY**

SDG #1600015

SAMPLE ANALYSIS REPORT

Lab sample #:	B6.04115B	Amount analyzed:	1.011e+00 GASH
Client sample ID:	C2-SB2-8496-01	Preparation batch #:	0013439N
Matrix:	SOIL	Assay batch #:	0020915Y
Collected:	2016-04-06 14:33 EDT	Prep procedure:	N/A
Sample type:	SAM	Analysis method:	NAREL ACT-02F-U
Dry/wet weight:	80.48 %	Analyst:	SPK
Ash/dry weight:	96.73 %	QC type:	ANA
Sample description:	N/A		
Comment:	N/A		

COUNTING INFORMATION

Date and time	Duration (min)	Detector ID	Operator
06/07/2016 17:27	1000.0	AS37	CEB

ANALYTICAL RESULTS

Analyte	Activity	$\pm 2 \sigma$ Uncertainty	MDC	Unit	Reference Date
U234	6.15e-01	1.4e-01	4.3e-02	PCI/GDRY	06/07/2016 17:27 CDT
U235	1.47e-02	3.1e-02	5.6e-02	PCI/GDRY	06/07/2016 17:27 CDT
U238	6.25e-01	1.4e-01	3.1e-02	PCI/GDRY	06/07/2016 17:27 CDT

**U.S. ENVIRONMENTAL PROTECTION AGENCY
NATIONAL ANALYTICAL RADIATION ENVIRONMENTAL LABORATORY**

SDG #1600015

SAMPLE ANALYSIS REPORT

Lab sample #:	B6.04116C	Amount analyzed:	1.003e+00 GASH
Client sample ID:	C2-SB3-0012-01	Preparation batch #:	0013439N
Matrix:	SOIL	Assay batch #:	0020915Y
Collected:	2016-04-06 13:17 EDT	Prep procedure:	N/A
Sample type:	SAM	Analysis method:	NAREL ACT-02F-U
Dry/wet weight:	78.00 %	Analyst:	SPK
Ash/dry weight:	92.46 %	QC type:	ANA
Sample description:	N/A		
Comment:	N/A		

COUNTING INFORMATION

Date and time	Duration (min)	Detector ID	Operator
06/07/2016 16:20	1000.0	AS38	CEB

ANALYTICAL RESULTS

Analyte	Activity	$\pm 2 \sigma$ Uncertainty	MDC	Unit	Reference Date
U234	7.86e-01	1.4e-01	3.5e-02	PCI/GDRY	06/07/2016 16:20 CDT
U235	4.87e-02	3.5e-02	3.7e-02	PCI/GDRY	06/07/2016 16:20 CDT
U238	8.00e-01	1.4e-01	2.5e-02	PCI/GDRY	06/07/2016 16:20 CDT

**U.S. ENVIRONMENTAL PROTECTION AGENCY
NATIONAL ANALYTICAL RADIATION ENVIRONMENTAL LABORATORY**

SDG #1600015

SAMPLE ANALYSIS REPORT

Lab sample #:	B6.04117D	Amount analyzed:	1.005e+00 GASH
Client sample ID:	C2-SB3-1224-01	Preparation batch #:	0013439N
Matrix:	SOIL	Assay batch #:	0020915Y
Collected:	2016-04-06 13:17 EDT	Prep procedure:	N/A
Sample type:	SAM	Analysis method:	NAREL ACT-02F-U
Dry/wet weight:	86.91 %	Analyst:	SPK
Ash/dry weight:	96.78 %	QC type:	ANA
Sample description:	N/A		
Comment:	N/A		

COUNTING INFORMATION

Date and time	Duration (min)	Detector ID	Operator
06/07/2016 16:20	1000.0	AS39	CEB

ANALYTICAL RESULTS

Analyte	Activity	$\pm 2 \sigma$ Uncertainty	MDC	Unit	Reference Date
U234	5.60e-01	1.1e-01	3.1e-02	PCI/GDRY	06/07/2016 16:20 CDT
U235	3.09e-02	2.7e-02	2.9e-02	PCI/GDRY	06/07/2016 16:20 CDT
U238	6.03e-01	1.1e-01	2.9e-02	PCI/GDRY	06/07/2016 16:20 CDT

**U.S. ENVIRONMENTAL PROTECTION AGENCY
NATIONAL ANALYTICAL RADIATION ENVIRONMENTAL LABORATORY**

SDG #1600015

SAMPLE ANALYSIS REPORT

Lab sample #:	B6.04118E	Amount analyzed:	9.998e-01 GASH
Client sample ID:	C2-SB3-4860-01	Preparation batch #:	0013439N
Matrix:	SOIL	Assay batch #:	0020915Y
Collected:	2016-04-06 13:18 EDT	Prep procedure:	N/A
Sample type:	SAM	Analysis method:	NAREL ACT-02F-U
Dry/wet weight:	79.16 %	Analyst:	SPK
Ash/dry weight:	86.50 %	QC type:	ANA
Sample description:	N/A		
Comment:	N/A		

COUNTING INFORMATION

Date and time	Duration (min)	Detector ID	Operator
06/07/2016 16:20	1000.0	AS40	CEB

ANALYTICAL RESULTS

Analyte	Activity	$\pm 2 \sigma$ Uncertainty	MDC	Unit	Reference Date
U234	6.68e-01	1.3e-01	3.2e-02	PCI/GDRY	06/07/2016 16:20 CDT
U235	2.87e-02	2.8e-02	3.1e-02	PCI/GDRY	06/07/2016 16:20 CDT
U238	6.99e-01	1.3e-01	2.9e-02	PCI/GDRY	06/07/2016 16:20 CDT

**U.S. ENVIRONMENTAL PROTECTION AGENCY
NATIONAL ANALYTICAL RADIATION ENVIRONMENTAL LABORATORY**

SDG #1600015

SAMPLE ANALYSIS REPORT

Lab sample #:	B6.04119F	Amount analyzed:	1.003e+00 GASH
Client sample ID:	C2-SB3-6072-01	Preparation batch #:	0013439N
Matrix:	SOIL	Assay batch #:	0020915Y
Collected:	2016-04-06 13:18 EDT	Prep procedure:	N/A
Sample type:	SAM	Analysis method:	NAREL ACT-02F-U
Dry/wet weight:	60.06 %	Analyst:	SPK
Ash/dry weight:	87.01 %	QC type:	ANA
Sample description:	N/A		
Comment:	N/A		

COUNTING INFORMATION

Date and time	Duration (min)	Detector ID	Operator
06/07/2016 16:20	1000.0	AS65	CEB

ANALYTICAL RESULTS

Analyte	Activity	$\pm 2 \sigma$ Uncertainty	MDC	Unit	Reference Date
U234	9.55e-01	1.6e-01	4.5e-02	PCI/GDRY	06/07/2016 16:20 CDT
U235	3.83e-02	3.8e-02	5.8e-02	PCI/GDRY	06/07/2016 16:20 CDT
U238	8.11e-01	1.4e-01	5.1e-02	PCI/GDRY	06/07/2016 16:20 CDT

**U.S. ENVIRONMENTAL PROTECTION AGENCY
NATIONAL ANALYTICAL RADIATION ENVIRONMENTAL LABORATORY**

SDG #1600015

SAMPLE ANALYSIS REPORT

Lab sample #:	B6.04120Y	Amount analyzed:	1.009e+00 GASH
Client sample ID:	C2-SB3-7284-01	Preparation batch #:	0013439N
Matrix:	SOIL	Assay batch #:	0020915Y
Collected:	2016-04-06 13:18 EDT	Prep procedure:	N/A
Sample type:	SAM	Analysis method:	NAREL ACT-02F-U
Dry/wet weight:	83.07 %	Analyst:	SPK
Ash/dry weight:	98.05 %	QC type:	ANA
Sample description:	N/A		
Comment:	N/A		

COUNTING INFORMATION

Date and time	Duration (min)	Detector ID	Operator
06/07/2016 16:20	1000.0	AS68	CEB

ANALYTICAL RESULTS

Analyte	Activity	$\pm 2 \sigma$ Uncertainty	MDC	Unit	Reference Date
U234	9.99e-01	1.7e-01	2.3e-02	PCI/GDRY	06/07/2016 16:20 CDT
U235	1.08e-02	2.3e-02	4.1e-02	PCI/GDRY	06/07/2016 16:20 CDT
U238	8.69e-01	1.5e-01	2.3e-02	PCI/GDRY	06/07/2016 16:20 CDT

**U.S. ENVIRONMENTAL PROTECTION AGENCY
NATIONAL ANALYTICAL RADIATION ENVIRONMENTAL LABORATORY**

SDG #1600015

SAMPLE ANALYSIS REPORT

Lab sample #:	LCS-00735180E	Amount analyzed:	1.000e+00 SAMP
Client sample ID:	N/A	Preparation batch #:	0013431E
Matrix:	N/A	Assay batch #:	0020907Y
Collected:	N/A	Prep procedure:	N/A
Sample type:	N/A	Analysis method:	NAREL ACT-02F-U
Dry/wet weight:	N/A	Analyst:	SPK
Ash/dry weight:	N/A	QC type:	LCS
Sample description:	N/A		
Comment:	N/A		

COUNTING INFORMATION

Date and time	Duration (min)	Detector ID	Operator
06/03/2016 14:25	1000.0	AS70	RCL

ANALYTICAL RESULTS

Analyte	Activity	$\pm 2 \sigma$ Uncertainty	MDC	Unit	Reference Date
U234	1.97e+00	2.4e-01	2.5e-02	PCI	06/03/2016 14:25 CDT
U235	8.06e-02	4.1e-02	3.1e-02	PCI	06/03/2016 14:25 CDT
U238	2.15e+00	2.6e-01	1.8e-02	PCI	06/03/2016 14:25 CDT

**U.S. ENVIRONMENTAL PROTECTION AGENCY
NATIONAL ANALYTICAL RADIATION ENVIRONMENTAL LABORATORY**

SDG #1600015

SAMPLE ANALYSIS REPORT

Lab sample #:	RBK-00735179M	Amount analyzed:	1.000e+00 SAMP
Client sample ID:	N/A	Preparation batch #:	0013431E
Matrix:	N/A	Assay batch #:	0020907Y
Collected:	N/A	Prep procedure:	N/A
Sample type:	N/A	Analysis method:	NAREL ACT-02F-U
Dry/wet weight:	N/A	Analyst:	SPK
Ash/dry weight:	N/A	QC type:	RBK
Sample description:	N/A		
Comment:	N/A		

COUNTING INFORMATION

Date and time	Duration (min)	Detector ID	Operator
06/03/2016 14:26	1000.0	AS71	RCL

ANALYTICAL RESULTS

Analyte	Activity	$\pm 2 \sigma$ Uncertainty	MDC	Unit	Reference Date
U234	8.11e-03	1.4e-02	2.4e-02	PCI	06/03/2016 14:26 CDT
U235	-5.55e-03	1.0e-02	3.4e-02	PCI	06/03/2016 14:26 CDT
U238	1.85e-02	1.9e-02	2.4e-02	PCI	06/03/2016 14:26 CDT

**U.S. ENVIRONMENTAL PROTECTION AGENCY
NATIONAL ANALYTICAL RADIATION ENVIRONMENTAL LABORATORY**

SDG #1600015

SAMPLE ANALYSIS REPORT

Lab sample #:	LCS-00735299V	Amount analyzed:	1.000e+00 SAMP
Client sample ID:	N/A	Preparation batch #:	0013439N
Matrix:	N/A	Assay batch #:	0020915Y
Collected:	N/A	Prep procedure:	N/A
Sample type:	N/A	Analysis method:	NAREL ACT-02F-U
Dry/wet weight:	N/A	Analyst:	SPK
Ash/dry weight:	N/A	QC type:	LCS
Sample description:	N/A		
Comment:	N/A		

COUNTING INFORMATION

Date and time	Duration (min)	Detector ID	Operator
06/07/2016 16:21	1000.0	AS69	CEB

ANALYTICAL RESULTS

Analyte	Activity	$\pm 2 \sigma$ Uncertainty	MDC	Unit	Reference Date
U234	1.90e+00	2.4e-01	1.9e-02	PCI	06/07/2016 16:21 CDT
U235	1.15e-01	5.0e-02	3.1e-02	PCI	06/07/2016 16:21 CDT
U238	1.77e+00	2.3e-01	2.3e-02	PCI	06/07/2016 16:21 CDT

**U.S. ENVIRONMENTAL PROTECTION AGENCY
NATIONAL ANALYTICAL RADIATION ENVIRONMENTAL LABORATORY**

SDG #1600015

SAMPLE ANALYSIS REPORT

Lab sample #:	RBK-00735298U	Amount analyzed:	1.000e+00 SAMP
Client sample ID:	N/A	Preparation batch #:	0013439N
Matrix:	N/A	Assay batch #:	0020915Y
Collected:	N/A	Prep procedure:	N/A
Sample type:	N/A	Analysis method:	NAREL ACT-02F-U
Dry/wet weight:	N/A	Analyst:	SPK
Ash/dry weight:	N/A	QC type:	RBK
Sample description:	N/A		
Comment:	N/A		

COUNTING INFORMATION

Date and time	Duration (min)	Detector ID	Operator
06/07/2016 16:21	1000.0	AS70	CEB

ANALYTICAL RESULTS

Analyte	Activity	$\pm 2 \sigma$ Uncertainty	MDC	Unit	Reference Date
U234	1.04e-02	1.4e-02	2.2e-02	PCI	06/07/2016 16:21 CDT
U235	1.25e-03	1.1e-02	2.6e-02	PCI	06/07/2016 16:21 CDT
U238	9.39e-03	1.3e-02	1.6e-02	PCI	06/07/2016 16:21 CDT

**U.S. ENVIRONMENTAL PROTECTION AGENCY
NATIONAL ANALYTICAL RADIATION ENVIRONMENTAL LABORATORY**

SDG 1600015

PREPARATION BATCH SUMMARY

Preparation batch #: 0013431E
Analysis method: NAREL ACT-02F-U
Preparation procedure: N/A

NAREL Sample #	Client Sample ID	Analysis #	QC Type	Yield	± 2 σ Uncertainty	Analyst
B6.04104Y	C2-SB1-0012-01	00733632D	DUP	75.62 %	6.87 %	SPK
B6.04104Y	C2-SB1-0012-01	00735178L		82.67 %	7.36 %	SPK
B6.04105Z	C2-SB1-4860-01	00733635G		78.28 %	6.92 %	SPK
B6.04106A	C2-SB1-6072-01	00733638K		80.46 %	7.20 %	SPK
B6.04107B	C2-SB1-7284-01	00733641E		83.36 %	7.44 %	SPK
B6.04108C	C2-SB1-8496-01	00733644H		76.89 %	6.87 %	SPK
B6.04109D	C2-SB2-0012-01	00733647L		75.71 %	6.79 %	SPK
B6.04110W	C2-SB2-1224-01	00733650F		74.94 %	6.81 %	SPK
B6.04111X	C2-SB2-2436-01	00733653J		77.27 %	6.95 %	SPK
B6.04112Y	C2-SB2-3648-01	00733656M		74.50 %	6.81 %	SPK
LCS-00735180E *		00735180E	LCS	79.08 %	7.19 %	SPK
RBK-00735179M *		00735179M	RBK	79.58 %	7.12 %	SPK

* Samples marked with an asterisk are not in this sample delivery group but were analyzed with it for QC purposes.

QC RESULTS FOR BATCH 0013431E

NAREL Sample #	Analysis #	QC Type	Analyte	%R	RPD	Z	Evaluation
B6.04104Y	00735178L	DUP	U234		15.5	-1.15	PASS
B6.04104Y	00735178L	DUP	U235		76.1	1.44	PASS-J
B6.04104Y	00735178L	DUP	U238		28.5	-2.10	WARN
LCS-00735180E	00735180E	LCS	U234	98.7		-0.21	PASS
LCS-00735180E	00735180E	LCS	U235	86.0		-0.63	PASS
LCS-00735180E	00735180E	LCS	U238	105.5		0.83	PASS
RBK-00735179M	00735179M	RBK	U234				PASS
RBK-00735179M	00735179M	RBK	U235				PASS
RBK-00735179M	00735179M	RBK	U238				PASS

Note: Results qualified with -J may be significantly under or over-estimated and are not evaluated for QC purposes.

**U.S. ENVIRONMENTAL PROTECTION AGENCY
NATIONAL ANALYTICAL RADIATION ENVIRONMENTAL LABORATORY**

SDG 1600015

PREPARATION BATCH SUMMARY

Preparation batch #: 0013439N
 Analysis method: NAREL ACT-02F-U
 Preparation procedure: N/A

NAREL Sample #	Client Sample ID	Analysis #	QC Type	Yield	$\pm 2 \sigma$ Uncertainty	Analyst
B6.04113Z	C2-SB2-7284-01	00733659Q	DUP	50.97 %	5.26 %	SPK
B6.04113Z	C2-SB2-7284-01	00735331B		53.38 %	5.46 %	SPK
B6.04114A	C2-SB2-7284-02	00733662K		56.45 %	5.53 %	SPK
B6.04115B	C2-SB2-8496-01	00733665N		43.76 %	4.78 %	SPK
B6.04116C	C2-SB3-0012-01	00733668R		65.24 %	6.28 %	SPK
B6.04117D	C2-SB3-1224-01	00733671L		66.56 %	6.22 %	SPK
B6.04118E	C2-SB3-4860-01	00733674P		54.19 %	5.40 %	SPK
B6.04119F	C2-SB3-6072-01	00733677T		59.73 %	5.83 %	SPK
B6.04120Y	C2-SB3-7284-01	00733680M		59.33 %	5.79 %	SPK
LCS-00735299V *		00735299V	LCS	73.95 %	6.77 %	SPK
RBK-00735298U *		00735298U	RBK	92.83 %	8.06 %	SPK

* Samples marked with an asterisk are not in this sample delivery group but were analyzed with it for QC purposes.

QC RESULTS FOR BATCH 0013439N

NAREL Sample #	Analysis #	QC Type	Analyte	%R	RPD	Z	Evaluation
B6.04113Z	00735331B	DUP	U234		29.2	-1.92	PASS
B6.04113Z	00735331B	DUP	U235		17.7	-0.29	PASS
B6.04113Z	00735331B	DUP	U238		0.5	-0.03	PASS
LCS-00735299V	00735299V	LCS	U234	95.0		-0.80	PASS
LCS-00735299V	00735299V	LCS	U235	122.2		0.83	PASS
LCS-00735299V	00735299V	LCS	U238	87.1		-2.21	WARN
RBK-00735298U	00735298U	RBK	U234				PASS
RBK-00735298U	00735298U	RBK	U235				PASS
RBK-00735298U	00735298U	RBK	U238				PASS